

REMARKS

This is in response to the Office Action of May 22, 2003 in which claims 1-22 were rejected. With this Amendment, claims 1, 10 and 14 are amended and all pending claims 1-22 are presented for reconsideration and favorable action.

In the office Action, the Examiner rejected claims 1, 6, 8, 14, 21 and 22 under 35 U.S.C. § 103 based upon Ackerman et al. in view of Aoyagi et al. Claim 7 was rejected as above and further in view of Green et al. Claims 9-12 and 15-20 were rejected as above and further in view of Setoguchi. Finally, claim 13 was rejected under 35 U.S.C. § 103 based upon Ackerman et al, Aoyagi et al., Setoguchi and further in view of Green et al. It is believed that independent claims 1, 10 and 14 are patentably distinct from these references.

Applicant notes that there are a number differences between the pending independent claims and the references identified by the Examiner.

The independent claims are directed to "standardized optical modules." The Office Action refers to Ackerman et al. However, Ackerman does not show a standardized optical module.

The independent claims also refer to prealignment of the first and second optical modules relative to a reference frame provided by a reference standard. Note that both optical modules are prealigned with respect to the same reference frame. This is not shown by the references. The Aoyagi reference does not show prealignment of an optical component in standardized optical modules to the same reference frame. Therefore, the rejection should be withdrawn.

Further, neither the laser or the optical waveguide of Ackerman et al. are mounted at predetermined locations on a fixed reference. The locations of these elements in Ackerman is not determined until the components are actually mounted on the substrate. The components would need to be adjusted in order to

obtain alignment therebetween. The Aoyagi et al. references does nothing to overcome this deficiency. In fact, even if one were to combine the two references, the resulting configuration would simply be the use of some type of visual placement indicator to assist in placing components onto a substrate. These references do not teach the use of prealigning standardized optical components within the same reference frame such that they can be mounted to a fixed reference at predetermined locations in a manner in which they optically interact with one another. In view of the above, it is believed that the rejection of the independent claims may be withdrawn.

Applicant notes that the dependent claims introduce numerous configurations, which read in combination with the independent claims, which are not shown or suggested by the references. These features include the prealignment of optical modules with respect to reference features, the use of reference features on a fixed reference at predetermined locations for use with prealigned optical modules, the use of standardized optical modules with a prealignment mount, the use of such prealignment mounts which allow movement with six degrees of freedom prior to fixing in the prealignment mount, or the use of standardized optical modules with a fixed reference coupling, for example. In view of the above amendments and remarks, it is believed that the present application is in condition for allowance. Consideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 

Judson K. Champlin, Reg. No. 34,797
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

JKC:lrs